

INTERNATIONAL JOURNAL  
of  
CONTEMPORARY  
EDUCATIONAL RESEARCH

JCER

# International Journal of Contemporary Educational Research (IJCER)

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## Psychological Distress Mediates the Relationship Between Social Support and Satisfaction with Life

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Article History

Received: 22.06.2022

Received in revised form: 22.08.2023

Accepted: 07.09.2023

Article Type: Research Article



### To cite this article:

Dadandı, İ. & Çıtak, Ş. (2023). Psychological distress mediates the relationship between social support and life satisfaction. *International Journal of Contemporary Educational Research*, 10(3), 724-734. <https://doi.org/10.52380/ijcer.2023.10.3.543>

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## Psychological Distress Mediates the Relationship between Social Support and Satisfaction with Life

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### Abstract

University students are susceptible to psychological issues due to various academic and social stressors in their lives. Decreased life satisfaction among these students can result in a wide variety of adverse outcomes, which can negatively impact their overall well-being and academic performance. The current study aims at examining the mediating role of psychological distress in the association between social support and life satisfaction. This cross-sectional study included 368 university students (F= 243, 66%; M= 125, 34%) from two public universities in Turkey. The research data were obtained utilizing the Brief Symptom Inventory, the Satisfaction with Life Scale, and the Multidimensional Scale of Perceived Social Support. The findings demonstrated that social support had a positive predictive effect on life satisfaction and a negative predictive effect on psychological distress. In addition, psychological distress negatively predicted life satisfaction. Moreover, the SEM analysis indicated that psychological distress played a partial mediating role in the association between social support and life satisfaction. These results highlight the importance of addressing social support and psychological distress in interventions aimed at increasing life satisfaction among university students.

**Keywords:** social support, psychological distress, life satisfaction

### Introduction

The university years represent the transitional period from adolescence to young adulthood and are widely recognized as one of the most crucial developmental stages because of their substantial implications for individuals' identity formation and future orientation. Along with developmental tasks, individuals also have to contend with a wide variety of challenges during this period, such as adapting to a new social environment, managing academic pressures, coping with financial issues, and planning their future careers. Therefore, college students are more susceptible to psychological issues in comparison to the general population (Hunt & Eisenberg, 2010). Furthermore, the circumstances have further worsened for university students during the COVID-19 pandemic, where new stressors, e.g., disruption of normal routines, social isolation, and uncertainty about the future, have been added to their lives and where their social support systems have collapsed (Commodari et al., 2021; Sahu, 2020). Research has shown that, during this period, there was a dramatic increase in psychological problems, such as elevated psychological distress, mood disorders, and substance use disorders (Salimi et al., 2023), as well as a decrease in overall well-being and life satisfaction among university students (Rogowska et al., 2021).

Life satisfaction pertains to individuals' cognitive assessment of their current circumstances or the general quality of their life (Pavot & Diener, 1993). This subjective evaluation reflects the individuals' level of contentment with their lives and is widely acknowledged as a crucial factor in subjective well-being (Diener et al., 2002). When conceptualizing mental health, the positive psychology movement underscores the significance of resources, psychological strengths, and positive attributes that promote individual growth and progress rather than merely the absence of psychological problems (Kobau et al., 2011; Seligman, 2008). Life satisfaction functions as a dynamic mechanism that helps individuals maintain a stable mental state and a positive mood by regulating the detrimental emotional effects of adverse situations (Heller et al., 2006). Research has clearly demonstrated that satisfaction with life is closely associated with positive life outcomes such as physical and psychological well-being, positive emotions, academic achievement, happiness, and total life quality (Grant et

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al., 2009; Odacı et al., 2021; Rode et al., 2005; Uysal et al., 2014). Conversely, dissatisfaction with life has been linked with higher levels of psychological distress and behavioral and emotional problems (Sæther, 2019). Furthermore, feelings of life dissatisfaction can endure and consistently exert a detrimental effect on an individual throughout their life. In a 20-year follow-up study, it was found that low life satisfaction during university years can lead to poorer health behaviors and an increased suicide risk in adulthood (Koivumaa-Honkanen et al., 2001). These findings highlight the significance of giving priority to policies that aim at improving mental health outcomes for students in the planning of the future direction of education. Therefore, it is crucial to understand and document the factors that influence university students' life satisfaction in order to guide preventive policies and interventions. Although previous research has revealed a significant connection between social support and life satisfaction (Mahanta & Aggarwal, 2013; Yalçın, 2011), further investigation is needed to understand the psychological processes that underlie this mechanism. In this vein, this study aims to investigate the mediation role of psychological distress in the linkage between social support and satisfaction with life.

### **Social Support and Life Satisfaction**

As inherently social beings, people require the establishment of social relationships and connections with others for their survival and progress. Social support refers to practical, appraisal, informative, and/or emotional support given to an individual by people in their social network (Lakey & Cohen, 2000). However, it is significant from a psychological perspective to differentiate between received social support, which is the amount of support by others, and perceived social support, which refers to individuals' subjective perceptions as to being able to get help and being valued and cared about when they need it (Norris & Kaniasty, 1996). The authors underline that perceived social support is a more reliable predictor of mental well-being results (Cunningham & Barbee, 2000). Previous research has consistently shown that supportive social interactions are crucial for an individual's well-being, positive feelings, and overall satisfaction with life (Alorani & Alradaydeh, 2018; Harandi et al., 2017; Kerr et al., 2006). The main effect model and the buffering model, developed by Cohen & Wills (1985), explain how social support contributes to overall happiness, psychological health, and life satisfaction. According to the main effect model, accessing social support regularly provides one with positive experiences; therefore, it directly contributes to life satisfaction. This is supported by research that has consistently identified a positive link between social support and life satisfaction. For instance, Yalçın (2011) has found that social support is a robust predictor of satisfaction with life among Turkish university students. Similarly, other studies have reported positive associations between social support from the people in one's intimate circle and elevated life satisfaction among university students (Alorani & Alradaydeh, 2018; Chen et al., 2021; Schunk et al., 2021).

However, the buffering model proposes that a supportive social environment mitigates the detrimental effects of stressful events on psychological health by moderating the stress responses exhibited by individuals to these events (Cohen & Wills, 1985). According to this model, social support can reduce the potential negative effects of stress on life satisfaction by helping individuals to cope with challenging situations. Studies have demonstrated that social support moderates the association between stressors and life satisfaction (Che et al., 2018; Szkody & McKinney, 2019), indicating the presence of a buffering effect. Zhou & Lin (2016) have found that social support strengthens the link between the ability to adapt to campus life and life satisfaction in undergraduate freshmen. Furthermore, Talwar et al. (2013) have reported that positive and supportive relationships can protect university students against the negative effects of stress. In this vein, one can argue that social support can contribute to the life satisfaction of university students both directly and indirectly by mitigating the potential adverse effects of daily stress and other unwanted events on their psychological health.

### **The Mediating Role of Psychological Distress**

Psychological distress denotes an unpleasant emotional or mental state that manifests through symptoms of discomfort, anxiety, depression, and other negative emotions (Ridner, 2004). It is a broad term encompassing a range of psychological symptoms and negative affective states that reflect an individual's subjective distress and reduced functional capacity. Therefore, elevated psychological distress is widely recognized as a significant indicator of poor mental status and psychological maladjustment (Drapeau et al., 2012; Mewton et al., 2016). The authors have emphasized that prolonged exposure to intense psychological distress can worsen an individual's mental health and increase the likelihood of developing psychiatric disorders over time (Kessler et al., 2009). Indeed, extensive research has shown that psychological distress can play a significant role in both the onset and persistence of a broad range of psychological problems, including depression, generalized anxiety

disorder, panic attacks, and suicidal thoughts (Eskin et al., 2016; Liang et al., 2020; Payton et al., 2009). Additionally, it has been linked to low self-esteem, diminished psychological well-being, and life dissatisfaction among university students (Duong, 2021; Kaya & Kaya, 2023; Kumar et al., 2016). In this context, it is reasonable to suggest that elevated psychological distress can disrupt the mental balance of university students and diminish their life satisfaction.

Drawing from the buffering model, this study focuses on the intermediary effect of psychological distress on the connection between university students' perceived social support and their sense of life satisfaction. The researchers who focus on the social determinants of mental health put an emphasis on social support as a protective factor (Turner et al., 1983). For instance, Smith & Hobbs (1966) argue that mental disorders are not only an individual phenomenon but are also related to deterioration in social support resources such as family, job, and friendship. Psychological distress is a maladaptive emotional response to stressful life events, such as trauma, loss, disasters, or major life changes. Therefore, it can be triggered or exacerbated by the stress burden stemming from adverse events, particularly when these challenges exceed an individual's coping capacity (Littleton et al., 2007; Watson et al., 2009). Conversely, when individuals perceive that they have access to supportive social resources that can help them cope with stressful events, they are less likely to experience psychological distress (Cohen & Wills, 1985). Consequently, social support may exert an indirect influence on satisfaction with life through a protective mechanism; it can alleviate the negative psychological consequences of challenging circumstances and reduce the intensity of psychological distress experienced by individuals. In other words, the beneficial impact of social support on life satisfaction may manifest indirectly through its mitigating effect on psychological distress (Figure 1).

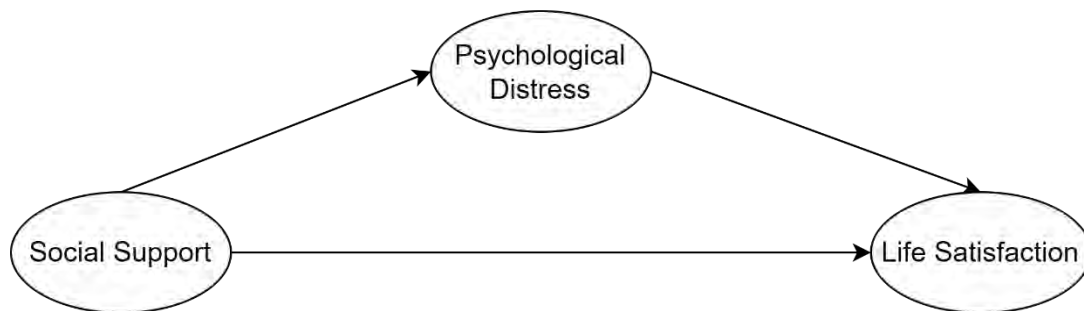


Figure 1. The hypothesized model

## Method

### Participants and Procedure

In this study, data were collected using the convenience sampling method. The study group comprised 368 ( $F=243$ , 66%;  $M=125$ , 34%) university students from two public universities in Turkey. Of the students, 38.9% ( $n=143$ ) were in their first year, 25% ( $n=92$ ) in their second, 18.5% ( $n=68$ ) in their third, and 17.7% ( $n=65$ ) in their fourth year. The average age of the sample was 20.63 ( $SD=2.62$ ), with ages ranging from 18 to 29.

Prior to data collection, the necessary permission was obtained from the administrations of the universities. The research data were gathered through face-to-face surveys in classroom settings. All potential participants were willing to participate in the research process and provided a consent form. Additionally, they were made aware of their rights to withdraw from the study and the confidentiality of their responses.

### Instruments

#### *Multidimensional Scale of Perceived Social Support (MSPSS)*

Zimet et al. (1990) developed the MSPSS to assess the degree of support perceived by an individual from their social environment. The MSPSS comprises 12 items and encompasses three dimensions, including family, friends, and significant others. Respondents rate each item using a Likert-type scale that spans 1 (Strongly

Disagree) to 7 (Strongly Agree). Each subscale includes four items. A total score can be computed by summing the scores of the subscales, resulting in a possible range of 12 to 84. A higher score indicates a higher perception of social support. The Turkish adaptation study of the MSPSS demonstrated that the Turkish version of the scale is a valid and reliable measure of perceived social support. The Cronbach's alpha coefficients were reported to range from .85 to .92 for the subscales and .89 for the overall scale (Eker et al., 2001). In this study, the Cronbach's alpha coefficients for the family, friends, significant other subscales, and the overall scale were found to be .75, .73, .70, and .88, respectively.

#### *Satisfaction with Life Scale (SWLS)*

The five-item SWLS was initially developed by Diener et al. (1985) and later adapted for Turkish by Dağlı & Baysal (2016). The participants are asked to rate five items on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The total scores can range from 5 to 25, with higher scores indicating higher life satisfaction. Consistent with its original form, the Turkish version of the SWLS demonstrated a unidimensional structure. In terms of reliability, the Cronbach's alpha coefficient was reported to be .88 (Dağlı & Baysal, 2016). In the current study, the Cronbach's alpha coefficient was determined to be .83.

#### *Brief Symptom Inventory (BSI)*

The BSI was constructed by selecting 53 items from the Symptom Checklist-90-R (SCL-90-R) to measure psychological symptoms. The Turkish version of the BSI assesses psychological symptoms in five domains: depression, anxiety, negative self-perception, somatization, and hostility. Participants rate each of the 53 items on a 5-point Likert scale (0=Not at all, 4=Very much) according to the frequency of experiencing the related symptom in the past seven days (Şahin & Durak, 1994). The BSI was determined to be a valid and reliable measure of psychological symptoms in the Turkish sample. Cronbach's alpha coefficients for its subscales have been reported to range from .75 (somatization) to .88 (depression) (Şahin & Durak, 1994). In this study, the Cronbach's alpha coefficients for the subscales of depression, anxiety, negative self-perception, somatization, and hostility were .90, .87, .74, .80, and .75, respectively.

### **Data Analysis**

First, a data screening procedure was employed to check the dataset for erroneous entries, missing data, and outliers. As a result of this process, 17 outliers identified based on the Mahalanobis distance were removed from the dataset, and the missing values were imputed using the series mean method. It was determined that the skewness and kurtosis coefficients were between -2 and +2, and the Mardia statistic was less than 5, indicating that the multivariate normality assumption was met (Byrne, 2010).

Secondly, descriptive statistics and Pearson correlations were computed using the SPSS 26.0 statistical software package. To investigate the hypothesized mediation model, Structural Equation Modeling (SEM) analysis was performed using AMOS 22.0. In the construction of the structural model, the sub-dimensions of the MSPSS and the BSI were designated as indicators for the latent variables of social support and psychological distress. On the other hand, two indicator variables (LSP1 and LSP2) were derived from the SWLS for the life satisfaction latent variable using the parceling method. The fit of the hypothesis model to the data was evaluated based on the following indices:  $X^2/df, \leq 5$ , CFI,  $\geq .95$ , TLI,  $\geq .95$ , RMSEA,  $\leq .06$ , SRMR,  $\leq .08$  (Byrne, 2010; Hu & Bentler, 1999). Finally, to assess the statistical significance of the indirect effect, a bootstrapping technique involving 5,000 bootstrapped samples and a 95% confidence interval was utilized.

## **Results**

### **Preliminary Analysis**

Descriptive statistics and Pearson correlations for all study variables are shown in Table 1. As expected, the correlation analysis demonstrated that there were negative correlations between the indicators of psychological distress and both the indicators of social support and the indicators of life satisfaction. Additionally, there were positive associations among the indicators of social support and the indicators of life satisfaction.

Table 1. Descriptive statistics and bivariate correlations

Variables	1	2	3	4	5	6	7	8	9	10
1.FAM <sup>a</sup>										
2.FRI <sup>a</sup>	.79**									
3.SO <sup>a</sup>	.64**	.71**								
4.ANX <sup>b</sup>	-.29**	-.22**	-.28**							
5.DEP <sup>b</sup>	-.40**	-.36**	-.35**	.78**						
6.NS-P <sup>b</sup>	-.28**	-.23**	-.30**	.83**	.79**					
7.SOM <sup>b</sup>	-.25**	-.21**	-.26**	.70**	.64**	.60**				
8.HOS <sup>b</sup>	-.15**	-.16**	-.25**	.69**	.65**	.67**	.50**			
9.LSP1 <sup>c</sup>	.42**	.39**	.43**	-.27**	-.38**	-.30**	-.20**	-.24**		
10.LSP2 <sup>c</sup>	.46**	.45**	.46**	-.29**	-.36**	-.30**	-.24**	-.26**	.71**	
Mean	19.63	18.42	21.03	12.34	15.73	11.06	6.73	6.79	9.25	5.80
SD	5.47	6.07	4.85	8.21	9.64	8.01	5.46	4.49	2.33	1.91
Skewness	-.49	-.22	-.71	1.07	.57	.79	1.05	.71	-.45	-.02
Kurtosis	-.55	-.88	.15	1.54	-.41	.24	.76	.08	.03	-.49

Note: <sup>a</sup>=Sub-dimension of MSPSS (FAM= Family, FRI=Friend, SO= Significant others)

<sup>b</sup>=Sub-dimensions of BSI (DEP=Depression, ANX=Anxiety, NS-P=Negative self-perception, SOM=Somatization, HOS=Hostility)

<sup>c</sup>=Parcels of SWLS (LSP1= Parcel 1, LSP2= Parcel 2)

### Test of the measurement model

In the context of this study, before testing the structural model, the validity and reliability of the latent constructs derived from the indicator variables were assessed through a measurement model analysis. This model included three latent variables and 10 indicator variables. Initial analyses revealed that the measurement model had an acceptable fit to the data:  $X^2/df = 3.33$ ; CFI= 97; TLI= 96; RMSEA= .080,  $p < .05$ , 90% CI (.063, .097), SRMR= .041. However, upon reviewing the modification indices, a covariance was added between the error terms of two indicators (Depression and Somatization) of psychological distress latent variable. Then, the analysis was repeated. The results of the SEM analysis revealed that the fit indices further improved after this modification:  $X^2/df = 2.98$ ; CFI = 0.98; TLI = 0.96; RMSEA = .073,  $p < .05$ , 90% CI (.056, .091); SRMR = .041.

In addition, the standardized regression coefficients (factor loadings) ranged between .77 and .91 for the indicators of social support, between .69 and .91 for the indicators of psychological distress and between .80 and .88 for the indicators of life satisfaction. The fact that these factor loadings were higher .60 indicated that the latent variables in the model were sufficiently represented by their respective indicators. Moreover, for the latent variables of social support, psychological distress, and life satisfaction, the Average Variance Extracted (AVE) values were found to be .72, .69, and .71, respectively. The Composite Reliability (CR) values for these variables were observed as .88, .92, and .83, respectively. Consequently, considering the AVE and CR values exceeded the recommended thresholds of 0.50 and 0.60 (Fornell & Lacker, 1981), it can be concluded that the validity and reliability of the latent variables in the model are satisfactory.

### Test of the structural model

After determining that the measurement model met the necessary statistical criteria, a structural model analysis was conducted to investigate the proposed relationships among the study variables. The results of the SEM analysis showed that the hypothesized model had a good model-data fit ( $X^2/df = 3.33$ ; CFI= 97; TLI= 96; RMSEA= .080,  $p < .05$ , 90% CI (.063, .097), SRMR= .041). Then, based on recommendations from modification indices, a covariance was added between the error terms of two indicators (Depression and Somatization) of psychological distress latent variable. This revised model was accepted as the final model as the modifications yielded better fit indices ( $X^2/df = 2.98$ ; CFI = 0.98; TLI = 0.96; RMSEA = .073,  $p < .05$ , 90% CI (.056, .091); SRMR = .041). Furthermore, it was found that all path coefficients in the final model were statistically significant. Specifically, social support positively predicted life satisfaction ( $\beta = .51$ ,  $p < .01$ , 95% CI [.41, .61]) and negatively predicted psychological distress ( $\beta = -.36$ ,  $p < .05$ , 95% CI [-.44, -.26]). In addition, psychological distress negatively explained life satisfaction ( $\beta = -.21$ ,  $p < .01$ , 95% CI [-.33, -.11]). It is also important to note that the final model explained 39% of the variance in life satisfaction and 13% of the variance in psychological distress.

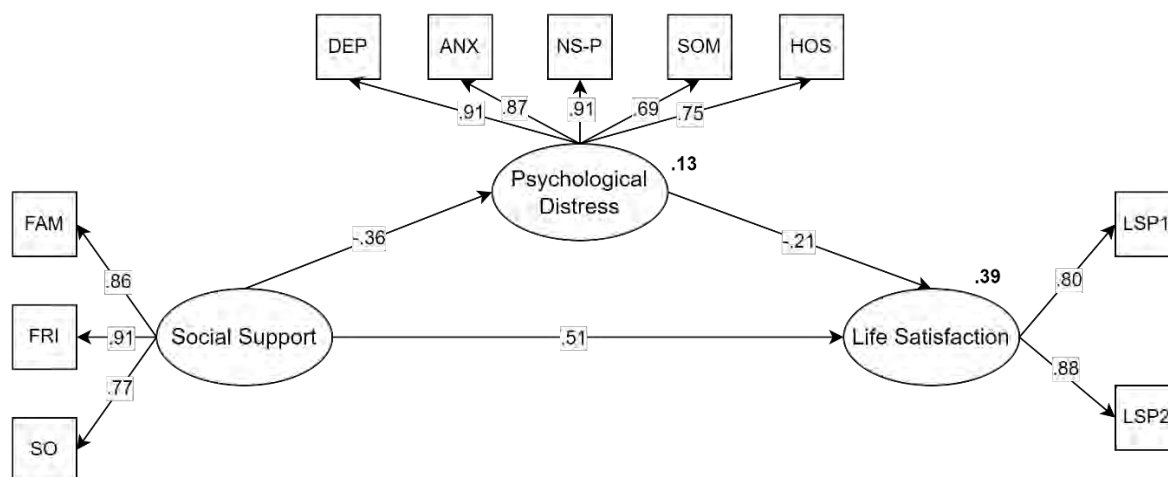


Figure 2. The final model

In order to evaluate the statistical significance of the indirect effect of social support, a bootstrapping procedure was run with 5000 bootstrap samples and a 95% confidence interval. As a result of this analysis, it was found that the standardized bootstrapped indirect effect was .08 and the 95% CI ranged from .04 to .13. The absence of the value "0" within the upper and lower bounds of the CI indicates a statistically significant mediation effect (Hayes, 2009). The standardized path coefficients for direct, indirect, and total effects among the variables are presented in Table 2.

Table 2. Standardized path coefficients for direct, indirect, and total effects

Model Pathways		β	95% CI	
			Lower	Upper
Direct effects				
Social support	→ Life satisfaction	.51**	.41	.61
Social support	→ P. distress	-.36*	-.44	-.26
P. distress	→ Life satisfaction	-.21**	-.33	-.11
Indirect effect				
Social support	→ P. distress → Life satisfaction	.08	.04	.13
Total effect				
Social support	→ Life satisfaction	.59	.50	.68

\*\* p<.01 \*p<.05

## Discussion and Conclusion

Dissatisfaction with life among university students is a growing issue, which can negatively affect their overall psychological well-being and academic performance. Social support plays a significant role in mitigating these feelings and enhancing life satisfaction (Kasprzak, 2010). The aim of this study was to examine the mediating role of psychological distress in the relationship between social support and life satisfaction. The SEM results demonstrated that the hypothesized model yielded good fit indices and confirmed the proposed connections among the study variables.

Consistent with previous research (Alorani & Alradaydeh, 2018; Han et al., 2021; Harandi et al., 2017), the findings of this study revealed a positive association between perceived social support and satisfaction with life among university students. The beneficial effect of social support on life satisfaction can be argued through several mechanisms. Firstly, it is important to note that humans, as inherently social beings, need robust social bonds for growth and development. The presence of supportive relationships in an individual's social environment can provide them with numerous positive emotions, including a sense of belonging and feelings of being loved and accepted, which are fundamental human needs (Düşünceli, 2020). The authors underline that fulfillment of these psychological and social needs is highly related to positive feelings and high life evaluations, which in turn can lead to heightened states of well-being and overall life satisfaction (Tay & Diener, 2011). Therefore, it can be argued that having strong social connections characterized by mutual respect, empathy, cooperation, and support can directly enhance university students' life satisfaction by fulfilling their



fundamental needs and consistently offering them positive experiences and emotions. Secondly, life satisfaction represents an individual's cognitive assessment of various aspects of their life, which includes but is not limited to social relations, the attainment of personal goals, and physical and mental health (Bramhankar et al., 2023; Gilman & Huebner, 2003). Consequently, life satisfaction is not solely determined by external factors such as an individual's current circumstances, conditions, and opportunities. It is also influenced by internal psychological mechanisms that can direct this subjective evaluation process, such as self-esteem and self-concept (Chang et al., 2003; Moksnes & Espnes, 2013). Receiving support and validation from significant people in the social network can enhance university students' self-esteem and self-concept (Godwin et al., 2004), which in turn can contribute to higher levels of satisfaction with life.

A significant finding obtained in this study is that psychological distress mediates the relationship between social support and satisfaction with life. This means higher levels of perceived social support can mitigate psychological distress, which in turn can lead to greater satisfaction with life. Conversely, a decline in social support can lead to heightened psychological distress, resulting in decreased life satisfaction. The harmful effects of mental health problems, including elevated psychological distress, are well documented both in the general population (Lombardo et al., 2018) and among university students (Güngör et al., 2021; Randelović et al., 2014). Research has revealed that university students' mental health status plays a significant role in their satisfaction with life. Students with good mental health generally perceive their lives as more meaningful and satisfying, while those facing psychological issues like depression, anxiety, and stress tend to report lower life satisfaction (Bukhari & Saba, 2017; Güngör et al., 2021). Entering university life can bring about many new challenges and potential stressors for individuals. Kumar et al. (2016) have reported that more than 50% of students experience depressive symptoms due to difficulties in their academic and social lives, including academic expectations, worries about the future, inadequacy of social activities, family pressure, and other issues. Consequently, some students find it difficult to adjust to campus life, leading to heightened psychological stress. However, the findings obtained from the mediation analysis of this study suggest that social support can be a protective factor against such distress. Specifically, it was found that university students who perceive their social relationships as intimate and supportive and view their friends and family members as available during times of need are less likely to experience symptoms of psychological distress, such as anxiety, depressive feelings, and stress. This can be explained through the buffering effect of social support. According to this model, when individuals face challenges, the belief that others can offer the necessary resources can reduce their perception of the situation as threatening and/or enhance their coping abilities. Social support can mitigate the harmful effects of adverse events by providing a solution to the problem or by reducing its perceived importance (Lin et al., 1985). Consequently, this can alleviate the psychological distress that an individual might otherwise experience. As a result, social support can indirectly enhance life satisfaction by mitigating psychological distress.

Research has clearly shown that higher education institutions should also prioritize enhancing the mental health of university students beyond their traditional focus on academic outcomes (Wörfel et al., 2016). In this context, the findings of this study have significant implications for educators, university administrators, and policymakers. Specifically, the results highlight the importance of addressing social support and psychological distress in interventions and policies aimed at enhancing university students' mental health and satisfaction with life. Therefore, administrators and policymakers are encouraged to develop policies that increase student counseling services and ensure that both financial and psychological support services are accessible to all students. Additionally, administrators and educators can consider developing social integration programs to improve social relations and build strong social ties among students. Furthermore, attention should be given to the identification of risk groups for life dissatisfaction, such as those with elevated psychological distress and/or low perceived social support, and interventions should be developed for these students.

## **Limitations and Recommendations**

Despite the contributions of this study, it is important to note that several limitations must be considered when interpreting the results. Firstly, this study employed a correlational design, which precludes making causal inferences among the research variables. Future research may consider adopting an experimental or longitudinal design to more precisely determine the causal direction of the relationships among social support, psychological distress, and life satisfaction discussed in this study. Second, this study focused on the mediating role of psychological distress in the relationship between perceived social support and life satisfaction. It would be interesting to investigate other psychological mechanisms that can direct this relationship, such as personality traits, self-esteem and academic engagement. Furthermore, future research may also focus on the potential mediating and moderating effects of contextual determinants, such as socioeconomic status and the availability



of support services, on the relationships among variables investigated in this study. Finally, since this study employed self-reported measures, the results may be susceptible to participant-induced errors, including common method bias and social desirability bias. To mitigate these potential biases, future studies could utilize multiple data sources, like qualitative interviews and instructor evaluations.

### Author (s) Contribution Rate

Author 1 and author 2 collectively designed the study, performed the analysis and co-authored the paper.

### Conflicts of Interest

There are no conflict of interest to declare.

### Ethical Approval

This study was approved by Ethics committee of Yozgat Bozok University (17.03.2021, number: 20/06)

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